

CLAIMS

What is claimed is:

1. A system for routing an incoming call from a caller comprising:

a telephony interface for receiving the incoming call from the caller;

5 a prompt generation unit coupled with the telephony interface for generating one or more prompts to solicit corresponding responses from the caller;

a response processing unit coupled with the telephony interface and the prompt generation unit for receiving, from the caller, responses to the one or more prompts and processing the responses to assign one or more respective weights to the call, the one or more
10 respective weights corresponding to each of the responses;

a data compilation unit coupled with the prompt generation unit and the response processing unit, wherein the data compilation unit processes the assigned weights to determine one or more overall weights of the call; and

a call routing unit coupled with the data compilation unit that routes the call to an
15 appropriate location using a call routing algorithm based, at least in part, on the one or more overall weights of the call.

2 The system of claim 1, wherein at least one of the data compilation unit and the call routing unit determines at least one of a priority of the call and a classification of the call,
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wherein the call routing unit routes the call based on at least one of the priority of the call and the classification of the call.

3. The system of claim 1, wherein the prompt generation unit generates prompts using text-to-speech conversion.

4. The system of claim 1, wherein the prompt generation unit generates prompts using digital audio files.

5. The system of claim 1, further comprising a browser, wherein the prompts are included in one or more browser pages that are operatively coupled in the system.

6. The system of claim 5, wherein the browser comprises a voice browser and the browser pages are implemented with VoiceXML.

7. The system of claim 6, wherein the respective weights are stored in one or more attribute tags that are communicated between at least two of the one or more browser pages.

8. The system of claim 6, wherein the responses are stored in one or more attribute tags that are communicated between at least two of the one or more browser pages.

9. The system of claim 5, wherein the browser pages are generated by an application providing programming features to:

define the one or more prompts;

define relationships between the one or more prompts;

define the respective weights associated with specific responses from the caller; and

define one or more trigger points at which the data compilation unit will process the respective weights prior to determine the one or more overall weights used for routing the call.

10. The system of claim 1, wherein the responses comprise at least one of spoken
5 responses and dual-tone-multi-frequency responses.

11. The system of claim 1, wherein the call routing unit employs a heuristic routing method.

10 12. The system of claim 11, wherein the heuristic routing method comprises one of a simulated-annealing method and a traveling-salesman problem solution method.

13. The system of claim 1, wherein the respective weights and the one or more overall weights include a plurality of weight types that may be used by the call routing unit when
15 routing the call.

14. In a call routing system for routing an incoming call from a caller, wherein the system comprises a telephony interface, a prompt generation unit; a voice response unit; a data compilation unit and a call routing unit, an article of manufacture comprising:

20 a storage medium having a plurality of machine-readable instructions stored thereon, wherein the instructions, when executed, provide for:

receiving the incoming call;

generating one or more prompts to solicit respective responses from the caller;

receiving, from the caller, the respective responses;

assigning one or more respective weights to the call, the one or more respective weights corresponding respectively to each of the one or more responses;

processing the weights to determine one or more overall weights of the call; and

5 routing the call to an appropriate location based, at least in part, on the one or more overall weights of the call.

15. The article of claim 14, wherein generating the one or more prompts comprises generating one or more text-to-speech prompts.

10 16. The article of claim 14, wherein generating the one or more prompts comprises playing one or more digital audio files.

17. The article of claim 14, wherein receiving the responses comprises receiving at
15 least one of spoken responses and dual-tone-multi-frequency responses.

18. The article of claim 14, wherein assigning the one or more respective weights comprises assigning the respective weights in a plurality of categories associated with the call.

20 19. The article of claim 14, wherein processing the weights comprises performing an arithmetic operation on the one or more respective weights to obtain the one or more overall weights.

20. The article of claim 19, wherein performing the arithmetic operation comprises calculating one or more sums from the one or more respective weights.

21. The article of claim 19, wherein performing the arithmetic operation comprises calculating one or more products from the one or more respective weights.

22. The article of claim 14, wherein routing the call comprises routing the call using a heuristic method.

23. The article of claim 22, wherein routing the call further comprises routing the call using one of a simulated-annealing method and a traveling-salesman problem solution method.

24. A machine for processing an incoming call comprising:
a prompt generating unit for providing one or more response soliciting prompts to a caller;

a response receiving unit coupled with the prompt generating unit for receiving respective responses from the caller to the one or more prompts and assigning respective weights based on the responses; and

a data compiling unit coupled with the response receiving unit for processing the respective weights to determine at least one overall weight.

25. The machine of claim 24, wherein a plurality of overall weights are used to determine at least one of a priority and a classification for the call, and

wherein the call is routed based on at least one of the priority and the classification.

26. The machine of claim 24, wherein the prompt generating unit comprises at least one of a text-to-speech converter and a digital audio player.

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27. The machine of claim 24, wherein the response receiving unit comprises at least one of a speech interpreter for recognizing spoken responses from the caller and a dual-tone-multi-frequency (DTMF) signal interpreter for recognizing DTMF responses from the caller.

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28. The machine of claim 24, wherein the machine further comprises a browser and the prompts are included in a plurality of interrelated browser pages, and

wherein the browser pages are implemented as part of a customer care center call routing application.

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29. The machine of claim 28, wherein the browser pages are generated by an application providing programming features to:

define the one or more prompts;

define relationships between the one or more prompts and the interrelated browser pages;

define the respective weights associated with the respective responses from the caller;

20 and

define one or more trigger points at which the data compiling unit will process the respective weights.

30. The system of claim 24, wherein the respective weights and the at least one overall weight include a plurality of weight types.

31. A method for routing an incoming call from a caller comprising:
5 receiving the incoming call;
generating one or more prompts to solicit respective responses from the caller;
receiving, from the caller, the respective responses;
assigning one or more respective weights to the call, the one or more respective weights
corresponding to each of the one or more respective responses;
10 processing the weights to determine one or more overall weights of the call; and
routing the call to an appropriate location based, at least in part, on the one or more
overall weights of the call.

32. The method of claim 31, wherein assigning the one or more respective weights
15 comprises assigning the respective weights in a plurality of categories associated with the call.

33. The method of claim 32, wherein processing the weights comprises performing an
arithmetic operation on the one or more respective weights to obtain a plurality of overall
weights corresponding to the plurality of categories.

34. The method of claim 33, wherein performing the arithmetic operation comprises
calculating a sum.

35. The method of claim 33, wherein performing the arithmetic operation comprises calculating a product.

36. The method of claim 31, wherein routing the call comprises routing the call using
5 a heuristic method.

37. The method of claim 36, wherein routing the call further comprises routing the call using one of a self-annealing method and traveling salesman problem solution method.